Frequently Asked Questions
Miami Harbor Dredging

Q. Why is test blasting required in Miami Harbor?

A. The Dodge-Lummus Island Turning Basin and the westerly portion of Fisherman's Channel are the last pieces of the 1989 Feasibility Report for a 42-foot project, Phase II and its further congressional authorization, to allow larger container vessels into the port. Successful completion of this project by others (not the Corps of Engineers) has been difficult, primarily due to the presence of hard limestone. Currently, these two areas have not been dredged to 42 feet and cannot be used, decreasing the port's efficiency and the national benefits derived from this project. The Port asked us to complete this project. During our design efforts, it was determined by our dredging experts that blasting is the most effective way of allowing the necessary dredging to occur to ensure navigational safety in the harbor. A test blast program will allow us to determine the lowest amount of explosives necessary to adequately break the rock during production blasting. Production blasting will fracture the rock for removal by a cutterhead dredge. The project will also provide data that will be used to plan similar projects in Florida and throughout the rest of the country, where hard rock may need to be dredged.

Q: When will the test blasting start, and how long will it last?

A. The test blasting is scheduled to begin on Saturday, June 25, 2005. One blast will be detonated each day, most likely in the afternoon, for a period of twelve consecutive days. Our contractor believes that one blast per day during production is sufficient to complete the project and will lessen the potential of impacting marine species.

Q: Is there any danger to marine life as a result of the blasting?

A. The National Marine Fisheries Service and the U.S. Fish and Wildlife Service, as well as the State of Florida have determined that endangered, threatened and protected marine mammals and reptiles are unlikely to be harmed by the detonations, due to our conservative safety radius, extensive monitoring program and mitigation measures to ensure that no dolphins, sea turtles or manatees will be within a pre-determined safety zone when the detonations occur.

Q: What precautions have been taken to ensure the safety of marine life?

A. We consulted with the National Marine Fisheries Service, the U.S. Fish and Wildlife Service and the State of Florida to design this project in a manner that would be as protective of marine life as possible. Some of these measures include:

a. We will use a confined blasting technique, where the borehole is capped with an inert material. Studies have shown that this practice decreases the strength of the pressure wave more than 90%.
b. We have selected explosive products that provide vibration and air blast control, which protects existing structures and marine wildlife.
c. Protective zones have been identified around the detonation areas.

Q: How will you know if marine life is present in the blasting area?

A. Both vessel and aircraft-based observers will be on-site throughout the blasting for the life of the project. These observers have been fully trained in monitoring marine mammals and sea turtles. The observers will monitor the location around the protective zones for at least one hour before, during and 30 minutes after each detonation. Additionally, the contractor will collect measurements on building and structure vibration as a measurement of pressure in the water and the Corps will be collecting data about underwater pressure and acoustics for a selected group of blasts to help answer questions on the differences between confined and non-confined blasts.

Q: What if the observers see a dolphin, manatee or sea turtle before a detonation occurs?

A. Detonation will not occur if a marine mammal or sea turtle is known to be in the safety zone. Under no circumstances will they be forced out of the area; they will simply be monitored until they leave the area on their own.

Q: Will I be able to hear, feel or see the blast when it occurs?

A. Only those who are working at the Port, in the area near the blast zone, will be able to see the blast when it occurs. Individuals near the water, most likely on the bayside area of the port, may be able to feel a slight vibration.